ART 34 AMDT

Amended Patent Claims

1. Process for splicing of optical fibers, where at least one laser beam (16) for thermal splicing of at least two optical fibers (10, 11) is directed to the optical fibers (10, 11), where a position of an impingement point (28) of each and every laser beam (16) onto the optical fibers (10, 11) in the longitudinal direction of the optical fibers (10, 11) to be spliced being changed by movement of each and every laser beam (16), so that the impingement point (28) is periodically moved in a predetermined area (29) around a splicing point (30) of the optical fibers (10, 11) to be spliced in their longitudinal direction, and that a frequency for the movement of the impingement point (28) onto the optical fibers (10, 11) to be spliced is calculated in such a way, that the duration of one period for the movement of the impingement point (28) is shorter than the thermal time constant of the optical fibers (10, 11) to be spliced.

2. Process according to claim 1, **characterized by** the movement of the impingement point (28) and or the intensity of the laser beam being modulated for the provision of an optimized output profile onto the optical fibers (10).

3. Process according to claim 2, **characterized by** a curve path or the speed of the movement of the impingement point (28), respectively, being changed for modulation of the movement of the impingement point (28) with a predetermined frequency for the movement of the impingement point.

4. Process according to claim 2 or 3, **characterized by** the output of a laser (15) being changed for the modulation of the intensity of the laser beam (16).

5. Process according to one of the claims 2 to 4, **characterized by** the modulation of the intensity of the laser beam (16) being synchronized with the modulation of the movement of the impingement point (28).

6. Device for splicing of optical fibers with a laser (15) for thermal splicing of at least two optical fibers (10, 11), with at least one lens (18) for focusing at least one of the laser beams (16) beamed from the laser (15) and with at least one optical component, especially a mirror (17) for pointing each and every laser beam (16) onto the optical fibers (10, 11) to be spliced, **characterized by** a driver unit (25) for each and every optical component, especially each and every mirror (17), where each and every optical component is movable in such a way by means of the driver unit (25), that a position of an impingement point (28) of each and every laser beam (16) onto the optical fibers (10, 11) to be spliced can be moved periodically in its longitudinal direction.

7. Device according to claim 6, **characterized by** a driver control unit (26) being allocated to the driver unit (25) for each and every movable optical component, especially for each and every mirror (17) for manipulation of a curve path or speed, respectively, of the movement of the impingement point (28).

8. Device according to claim 6 or 7, **characterized by** a laser control unit (27) being allocated to the laser (15) for modulation of the intensity of the laser beam (16).

9. Device according to claim 7 or 8, **characterized by** the driver control unit (26) and the laser control unit (27) being connected to a central control unit (22).